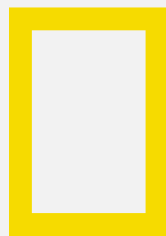


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Rat Invaders: Islands Fighting Back Against Killer Rodents

The world's biggest rat-killing campaign underway on South Georgia Island.



A light-mantled sooty albatross looks down on Gold Harbour, South Georgia Island.

PHOTOGRAPH BY PAUL NICKLEN, NATIONAL GEOGRAPHIC

South Georgia Island, a lonely British Antarctic territory in the far South Atlantic, has a rat problem.

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Since the furry stowaways landed here aboard sealing and whaling ships in the 19th century, they've been wreaking ecological havoc on the island and its ground-nesting seabirds by preying on the birds and their eggs.

Enter an international team of wildlife biologists, who have recently completed the second phase of history's largest rat-eradication program on the remote island.

Braving appalling weather in the run-up to the [Antarctic](#) winter, the

group's helicopter pilots logged hundreds of hours in perilous flying conditions to spread nearly 200 tons of rat poison over 224 square miles (580 square kilometers) of South Georgia's coastline.

The ultimate goal: To rid this once supreme seabird habitat of its millions of rats once and for all. South Georgia was probably the richest seabird-breeding area in the world when British Captain James Cook visited it in 1775, according to Tony Martin of the University of Dundee, who leads the rat-eradication campaign on behalf of the [South Georgia Heritage Trust](#). ([See more pictures of South Georgia.](#))

Now the island has less than one percent of its original seabird population, he said. "And that is down to rats. This is a human-induced problem, and it is down to humans to do something about it."

And they are. This recent bait drop follows a successful trial two years ago, which cleared 10 percent of South Georgia of the invasive rodents. Next year, Martin said, the group plans to return and finish the job, hopefully rendering South Georgia rat-free by 2015.

"This is ten times bigger than anything that has ever been attempted anywhere else," Martin said.

Oh, Rats: Getting Rid of Rodents

South Georgia's ambitious rat-eradication campaign may be the world's biggest at the moment, but it's far from the only one. ([Watch a video of rats at night.](#))

Many of the [world's most biologically important island ecosystems](#) [have been invaded by rats](#). Many seabirds nest, breed, and raise their young on islands because they've been historically safe from predators—until rats came along.

What's more, while islands may represent only 5 percent of the world's land mass, they account for half of all the world's endangered species.

As of last count 435 islands around the world have been cleared of rats, according to Island Conservation, an organization that works to remove invasive species on islands. It's a number that is growing quickly, and so is the success rate.

The projects try their best not to hurt the species they're supposed to protect.

For one, the rat poison, brodifacoum, is not water soluble, so it can't leach into the groundwater or poison waterways.

Some seabird scavengers could eat stricken rats and become ill, though the rat carcasses are hard to find: The poison makes the rats photophobic, or shy of light, so the rodents usually retreat to their burrows before dying.

It's possible that a few duck or other birds may ingest the poisonous pellets, but since rats eat thousands and possibly millions of chicks a year overall, poison is still the better strategy, experts say.

"This is a war that is being won island by island," said Brad Keitt, the group's director of conservation. (Also see "Giant Killer Mice Decimating Rare Seabirds.")

Even so, "each island, of course, brings with it its own challenges," said veteran helicopter pilot Peter Garden, a New Zealander who worked on rat-eradication projects in Campbell Island, South Georgia, the Seychelles, the South Pacific, Alaska, and the Caribbean.

"South Georgia was especially tough," he said. "Its remote location in the South Atlantic made it a huge logistical challenge, and ... it receives some ferocious weather.

"The fact that it is also the largest breeding area in the South Atlantic

for seabirds means that there are always lots of large birds sharing the airspace, and this creates quite a hazard for us. We are operating around 150 feet [46 meters] above the ground, where a lot of bird activity occurs."

Here are some islands that are aggressively ridding their homes of rats.

New Zealand

New Zealanders lead the field when it comes to getting rid of rats, according to Martin.

"They began focusing on rat eradication on their own islands back in the 1980s in order to try to preserve their native wildlife. Over the years they've had a lot of successes, developed a huge amount of expertise, and in the 1990s began perfecting the science of using helicopters to make aerial bait drops over large areas." (Also see "[Drug-filled Mice Airdropped Over Guam to Kill Snakes.](#)")

New Zealand's successful campaign to remove nearly a quarter of a million brown rats from Campbell Island—a 44-square-mile (114-square-kilometer) sub-Antarctic island—was the world's largest rat-eradication project when it was completed in 2001. Twelve years later the island is rat-free and the once critically endangered [Campbell Island teal](#)—a duck that fell victim to the rats—has bounced back. ([See seabird pictures.](#))

Sophisticated poison-dispersal techniques using GPS guidance and specially designed spreader buckets slung under the helicopters were developed for the Campbell Island operation, and went on to pave the way for the much larger one on South Georgia.

Lord Howe Island, Australia

A U.S. \$9 million program to eradicate an estimated 130,000 rats on the island, a subtropical paradise located 370 miles (595 kilometers) off [Australia's](#) eastern coast, was launched in July 2012.

Rats originally arrived aboard the S.S. *Makambo*, which ran aground on the north end of the island in June 1918. It was a catastrophe—at least 30 species of wildlife have since disappeared completely from the island, while another 13 species remain under threat. Lord Howe Island has often been cited as a worst-case example of rat devastation.

Queen Charlotte Islands, British Columbia

Sometimes described as the Galápagos of the north, the chain of islands in British Columbia has some of the largest remaining seabird colonies in Canada.

At one time these seabirds could be counted in the hundreds of thousands, but three centuries of rat infestation have whittled their numbers down to 20,000 or so.

Last September a rat-eradication program was launched, and so far two of the islands have been cleared of rats.

Galápagos Islands, Ecuador

The breathtaking island chain off Ecuador's coast, famous for its bird and reptile life, is home to an estimated 180 million rats—courtesy of the whalers who often stopped here in centuries past.

As elsewhere, the rodents have been an ecological disaster, devouring every single tortoise hatchling for the past hundred years.

Last November the Ecuadorian government set into motion South America's biggest rat-eradication scheme, hoping to have the island chain free of rats by 2020.

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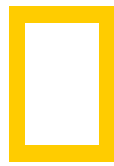
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